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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,237	04/12/2004	Gareth Knowles	QT-2004-12-NP	4987

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EXAMINER	
LE, HOANGANH T	

ART UNIT	PAPER NUMBER
2821	

DATE MAILED: 07/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/823,237	KNOWLES ET AL.	
	Examiner	Art Unit	
	HoangAnh T. Le	2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 April 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10,14,15,18-29,32 and 34-41* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *14 and 15* is/are allowed.

6)☒ Claim(s) *1-10,18-29,32,34-41* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Hoanganh Le
Primary Examiner

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The amendment filed on April 04, 2006 is acknowledged.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-8,10,18-29,32, and 34-37 are rejected under 35 U.S.C. 102(e) as being anticipated by Jackson (the US patent No. 6,885,345, of record).

The Jackson reference teaches in figures 1-6 a reconfigurable adaptive circuit matrix comprising: at least one sheet of dielectric material (col. 6, lines 1-4), a plurality of secondary electronic circuits 10 (col. 6, lines 1-20) arranged in a matrix and supported on or within each the dielectric material, one or more the secondary electronic circuits effected by at least one characteristic of the dielectric material (col. 7, lines 33-45), an external switch 12,14 enabled by a magnetic field, a thermal field, or a vibration (col. 7, lines 64-67, and col. 8, lines 1-3) for electrically activating one or more of the secondary circuits when the switch means is activated (figure 1), and means for varying the characteristic of the secondary electronic circuits to vary operation (figure 2). The dielectric material is a ferrotunable material (col. 7, line 48). One or more the

secondary electronic circuits have a voltage adjustable device thereon (col. 6, lines 31-36). The secondary electronic circuits provide adaptation of radiation or reception characteristics of an electromagnetic coupling arrangement comprising at least one adjustable passive component (figure 2). The secondary electronic circuits provide a reconfigurable antenna and the dielectric layer has a non-conducting outer surface, the secondary electronic circuits comprising at least one adjustable passive component and mounted to an antenna substrate (see abstract). The secondary electronic circuits provide a reconfigurable antenna and the dielectric layer has a non-conducting outer surface, the secondary electronic circuit comprising at least one adjustable passive component and at least one active component mounted to an antenna substrate (see abstract). Figure 1 shows a plurality of conducting patches 10. The non-conducting surface is a first surface of a dielectric layer having a second surface supporting an electrically conductive layer (col. 5, lines 57-65).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jackson (cited above) in view of Yandrofski et al (the US Patent No. 5,589,845, of record).

The Jackson reference teaches every feature of the claimed invention, excluding

the dielectric layer comprising a plurality of layers of crystalline polymer.

The Yandrofski et al reference teaches the use of a dielectric layer comprising a plurality of layers of crystalline polymer in order to tune the frequency of the antenna (col. 6, line 42 and see abstract).

Since one of ordinary skill in the art would recognize the benefit of tuning the frequency of the antenna, it would have been obvious to provide Jackson with the dielectric layer comprising a plurality of layers of crystalline polymer as taught by Yandrofski et al.

6. Claims 38-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jackson (cited above) in view of Chang (the US Patent No. 6,260,087, of record).

The Jackson reference teaches every feature of the claimed invention, excluding a microcontroller circuit having a plurality of programmable microprocessors or digital signal processors. non-volatile volatile RAM , interface peripherals and lock/timing circuits, the interface peripherals are comprised of a plurality of digital to analog converter circuits, the intedace peripherals are comprised of a plurality of logic circuits, and the logic circuits are comprise of a plurality of programmable logic devices including GAL, PAL, PLD, CPLD or FPGA.

The Chang reference teaches the use of comprising a microcontroller circuit having a plurality of programmable microprocessors or digital signal processors. non-volatile volatile RAM , interface peripherals and clock/timing circuits, the interface peripherals are comprised of a plurality of digtal to analog converter circuits, the interface peripherals are comprised of a plurality of logic circuits, and the logic circuits

are comprise of a plurality of programmable logic devices including GAL, PAL, PLD, CPLD or FPGA are well known in the art (col. 2, lines 24-29).

Since one of ordinary skill in the art would recognize the benefit to alternate 1Cs, it would have been obvious to provide Jackson with programmable logic devices as taught by Chang.

Allowable Subject Matter

7. Claims 14-15 are allowed.

Response to Arguments

8. Applicant's arguments filed April 04, 2006 have been fully considered but they are not persuasive.

Applicant argues that Jackson does not teach the switch enabled by a magnetic field, a thermal field or a vibration. Examiner respectfully disagrees. Jackson does teach the switch enabled by a magnetic field, a thermal field or a vibration (col. 7, lines 64-67 and col. 8, lines 1-3).

Since Jackson does show all claimed structure, including the switch enabled by a magnetic field, a thermal field or a vibration, the 102 rejection is proper.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HoangAnh T. Le whose telephone number is (571) 272-1823. The examiner can normally be reached on 8:00am-4:30pm.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hoanganh Le
Primary Examiner